

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A content-providing server for executing content transmission to a client and content recording processing, ~~said~~ the server comprising:

a tuner for executing data reception processing;

a data transmission/reception unit for executing communication processing between the server and a client, wherein the communication processing includes communication of control information and content ~~[[of]] received content from said by the tuner and of control information, the received content including a first content received by the tuner over a first channel and a second content received by the tuner over a second channel;~~

a metadata storage unit ~~wherein~~ including attribute information corresponding to the received content, wherein the attribute information is stored as content information;

a content storage unit for storing the received content in an hierarchical content management directory, wherein the metadata storage unit includes information describing the hierarchical management directory;

a content management unit for ~~executing providing~~ processing ~~as to a client of~~ ~~said~~ the content information to be provided to the client; and

a content delivery control unit for ~~executing~~ processing ~~as to~~ the received content ~~via said tuner; said,~~ the content delivery control unit comprising:

a tuner control instance for arranging the first content and the second content as a unit of content, ~~executing delivery processing control as to the client of the received content of said tuner, and~~ wherein a recording source content identifier is set corresponding to the ~~tuner-received content~~ unit of content, and the recording source content identifier is a channel list Uniform Resource Locator (URL); and

a storage unit control instance for storing the unit of content ~~executing storage processing control as to said content storage unit of the received content by said tuner, and,~~ wherein a recording target content identifier is set corresponding to the unit of content; ~~wherein each of said tuner control instance and said storage unit control instance independently executes control corresponding to the set content identifiers,~~ and

wherein the data transmission/reception unit uses the channel list URL to provide the first content and the second content to the client.

2. (Currently Amended) The content-providing server according to Claim claim 1, wherein ~~[[a]]~~ the recording source content identifier is ~~set in said~~ included in the storage unit control instance~~[[:]], and the~~ and wherein said storage unit control instance is ~~configured so as to execute specific processing of the recording~~ processes the first content and the second content based on ~~[[said]]~~ the recording source content identifier.

3. (Currently Amended) The content-providing server according to Claim claim 1, wherein ~~[[said]]~~ the content management unit is ~~configured so as to execute~~ processes the content information ~~management~~ based on ~~[[a]]~~ the content management directory

~~and is configured so as to set said recording source content identifier as the metadata of the tuner container as an management object of said content management directory, and to set said recording target content identifier as the metadata of a content storage object as an management object of said content management directory, and also to execute the providing processing of said metadata according to a request from said client; and,~~ and wherein each of said the tuner control instance and said the storage unit control instance ~~execute setting processing of said~~ set the recording source content identifier ~~[[or]]~~ and the recording target content identifier, ~~according to~~ based on a request from said the client.

4. (Currently Amended) The content-providing server according to ~~Claim~~ claim 1, wherein said ~~recording source content identifier is a~~ the channel list URL identifier ~~as identifying information of~~ identifies a channel list including the first channel and the second channel ~~at least multiple channels within the receiving channels of said tuner;~~ and wherein said tuner control instance is configured so as to ~~set multiple content to be received by the tuner, corresponding to multiple channels described in said channel list, as one unit of the control content, and executes control of the delivery content corresponding to the multiple channels described in said channel list,~~ wherein the first content and the second content is provided to the client based on a control request received by the client, the control request including ~~corresponding to the channel list~~ URL identifier to be received from a client.

5. (Currently Amended) The content-providing server according to Claim claim 1, wherein ~~said recording source content identifier is a channel list URL (Uniform Resource Locator) which is set as identifying information of a channel list including at least multiple channels within the receiving channels of said tuner; and wherein said the~~ recording source content identifier is a content storage object URL which is set as an identifier of identifies a content storage object corresponding to a content storage region which is set included in ~~[[said]]~~ the content storage unit.

6. (Currently Amended) The content-providing server according to Claim claim 1, wherein ~~said the~~ content management unit is configured ~~so as to execute content information management based on the content management directory, and is configured so as to be capable of retaining at least one of the to store~~ setting information ~~[[of]]~~ corresponding to the received content, the setting information including recording ending time information and recording quality information, and as the metadata of the content storage object as the management object of said content management directory; and the storage unit control instance wherein ~~[[said]]~~ the recording target content identifier is set ~~is configured so as to execute the content recording processing according to said~~ based on the setting information.

7. (Currently Amended) The content-providing server according to Claim claim 1, wherein ~~said the~~ content management unit is configured ~~so as to execute processing for setting to set~~ a content storage object URL as the metadata ~~as to the generating object, under the condition that information showing that a generating request for the content~~

~~storage object for storing live content is included in the generating request of the content storage object from said client.~~

8. (Currently Amended) The content-providing server according to ~~Claim~~ claim 1, wherein ~~said content providing server is configured so as to execute setting processing for said storage unit control instance, under the condition that information showing that a generating request for the content storage object for storing the first content is live content, and providing the first content includes live streaming of the first content to the~~ is included in the generating request of the content storage object from said client.

9. (Currently Amended) The content-providing server according to ~~Claim 8~~ claim 1, wherein the ~~setting processing of said recording~~ target content identifier includes unit control instance includes setting process of the a content storage object URL as a recording target content identifier.

10. (Currently Amended) The content-providing server according to ~~Claim~~ claim 1, wherein the content information includes protocol information ~~corresponding to the content is included in said content information; and wherein~~ including a function ID is set in the protocol information, which is set corresponding to said recording source content, as to identify the tuner identifying information; and wherein ~~a,~~ the function ID is set in the protocol information, which is set corresponding to said recording target content, as content storage unit identifying information; and wherein said content delivery control unit is configured so as to execute setting processing as a control

~~instance that executes control for control objects wherein each of said being used to~~
~~determine the tuner control instance and said the storage unit control instance is-~~
~~determined based on said function ID.~~

11. (Currently Amended) The content-providing server according to ~~Claim~~ claim 1,
wherein said the content delivery control unit is configured ~~so as to set a control~~
~~instance which executes processing control for content specified by the content-~~
~~identifier, and to execute the control for each content based on the control instance; and~~
~~is of a configuration to execute that is configured to manage a connection between the~~
~~server and the client management based on a connection management table~~
~~corresponding to an instance ID, the instance ID identifying the which is an identifier for~~
~~each of said tuner control instance and said the storage unit control instance, a~~
~~connection ID which is a connection identifier between the server and client, and~~
~~protocol information corresponding to the delivery content.~~

12. (Currently Amended) The content-providing server according to ~~Claim~~ claim 1,
wherein said the content delivery control unit ~~is configured so as to receive~~ receives a
~~control request for delivery content according to a SOAP (Simple Simple Object Access~~
~~Control) Access (SOAP) protocol content request from [[a]] the client, and execute~~
~~content control based on the control request.~~

13. (Currently Amended) An information processing device ~~as a client which requests data processing of tuner received~~ requesting content as to a received by a tuner in a server, the information processing device comprising:

a processor for sending wherein said information processing device sends, to said server, first protocol information including a tuner identifying function ID as the tuner identifying the tuner receiving the content, information and second protocol information including a data storage unit identifying function ID as the data storage unit identifying information, within the protocol information to be included in the content information received from said server and is configured so as to execute sending processing of a control request as to each control instance wherein the tuner control instance ID and the storage unit control instance ID to be received from said server is acquired, and said control instance ID is specified and a storage unit of the server storing the content received by the tuner, wherein the content received by the tuner includes a first content received by the tuner over a first channel and a second content received by the tuner over a second channel, the first content and the second content being arranged in an hierarchical content management directory described by metadata stored in the server;

an input device for receiving the first content and the second content based on the first protocol information and the second protocol information sent to the server, the first content and the second content being received as a unit of content, wherein a recording source content identifier that is set corresponding to the unit of content is used to receive the first content and the second content, and the recording source content identifier is a channel list Uniform Resource Locator (URL); and

an outputting device for outputting the first content and the second content,
wherein the client switches between the first content and the second content based on
the channel list URL.

14. (Currently Amended) The information processing device according to ~~Claim~~ claim
~~13; wherein said information processing device is configured so as to perform setting~~
~~requests of,~~ wherein the processor sends a request to set the recording source content
identifier, the recording source content identifier being set to correspond to ~~as to said~~
~~tuner~~ a control instance of the tuner, ~~and of the recording target content identifier as to~~
~~said storage unit control instance, and also executes processing for notifying said~~
~~recording source content identifier as to said storage unit control instance.~~

15. (Currently Amended) The information processing device according to ~~Claim~~ 14
claim 13, wherein the processor sends a request to set a recording target content
identifier, the said recording source target content identifier is a channel list URL
~~(Uniform Resource Locators) which is~~ being set to correspond ~~as identifying information~~
~~of a channel list including at least multiple channels within the receiving channels of said~~
~~tuner; and wherein said recording target content identifier is a content storage object~~
~~URL which is set as an identifier of a content storage object corresponding to a content~~
~~storage region which is set in said content storage unit~~ the server.

16. (Currently Amended) An information processing method for executing processing
of content received from a tuner in a server, ~~said~~ the method comprising:

receiving, by the tuner, content over a plurality of channels, the received content including a first content received by the tuner over a first channel and a second content received by the tuner over a second channel;

storing the received content in a hierarchical content management directory;

storing metadata including attribute information corresponding to the received content, the metadata including information describing the hierarchical content management directory;

arranging the first content and the second content as a unit of content;

~~a step for~~ setting a recording source content identifier as corresponding to a tuner control instance and the unit of content, wherein the tuner control instance is used which executes delivery processing control as to send the received content to a client of the content received from said tuner, and the record source content identifier is a channel list Uniform Resource Locator (URL);

~~a step for~~ setting a recording target content identifier as corresponding to a storage unit control instance ~~which executes recording processing used to control the storing of the received content as to said content storage unit of the content received from said tuner;~~

~~a control request receiving step for~~ receiving, from the client, a control request ~~which has identifying information of identifying the tuner control instance from the client or the storage unit control instance; and~~

~~a control step for executing tuner control or storage unit control from the tuner control instance or the storage unit control instance, based on said identifying-~~

information providing the first content and the second content to the client by using the channel list URL.

17. (Currently Amended) The information processing method according to Claim claim 16, further comprising:

~~a step for setting [[a]] the recording source content identifier as to said correspond to a recording unit control instance; wherein said recording unit control instance executes specific processing of the recording content based on said recording source content identifier.~~

18. (Currently Amended) The information processing method according to Claim claim 16, further comprising:

~~a step for setting said storing the recording source content identifier as the metadata of the tuner container as the management object of the content management directory; a step for setting said~~

~~storing the recording target content identifier as the metadata of the content storage object as the management object of said content management directory; and~~

~~a step for executing the providing processing of said the metadata according to based on a request from said the client; and, with each of said tuner control instance and said recording unit control instance, executing of setting processing of said recording source content identifier or recording target content identifier, according to the request from said client.~~

19. (Currently Amended) The information processing method according to ~~Claim~~ claim 16, wherein ~~said recording source content identifier is a~~ the channel list identifier URL ~~identifies the first channel and the second channel as identifying information of a~~
~~channel list including at least multiple channels within the receiving channels of said~~
~~tuner; and wherein said tuner control instance sets multiple content to be received by~~
~~the tuner, corresponding to multiple channels described in said channel list, as one unit~~
~~of the control content, and executes control of the delivery content corresponding to the~~
~~multiple channels described in said channel list, based on a control request~~
~~corresponding to the channel list identifier to be received from a client.~~

20. (Currently Amended) The information processing method according to ~~Claim~~ claim 16, wherein ~~said recording source content identifier is a~~ channel list URL (Uniform-Resource Locator) ~~which is set as identifying information of a channel list including at~~
~~least multiple channels within the receiving channels of said tuner; and wherein said~~ the
~~recording target content identifier is a content storage object URL which is set as an~~
~~identifier of~~ identifies ~~a content storage object corresponding to a content storage region~~
~~which is set in said content storage unit~~ in the server.

21. (Currently Amended) The information processing method according to ~~Claim~~ claim 16, further comprising:

~~a step for setting at least one of the setting information of~~ corresponding to the
received content, the setting information including ~~recording ending time information~~
~~and recording quality~~ information, ~~as the metadata of the content storage object as the~~

~~management object of said content management directory; and a step for executing the content recording processing according to said setting information with the storage unit control instance wherein said the recording target content identifier is set based on the setting information.~~

22. (Currently Amended) The information processing method according to ~~Claim~~ claim 16, further comprising:

~~a step for executing processing for setting a content storage object URL as the metadata as to the generating object, under the condition that information showing that a generating request for the content storage object for storing live content is included in the generating request of the content storage object from said client.~~

23. (Currently Amended) The information processing method according to ~~Claim~~ claim 16, further comprising: ~~a step for executing setting processing for said storage unit control instance, under the condition that information showing that a generating request for the content storage object for storing wherein the first content is live content is included in the generating request of the content storage object from said client and providing the first content includes live streaming of the first content to the client.~~

24. (Currently Amended) The information processing method according to ~~Claim~~ claim 23, wherein the setting processing of said storage unit control instance includes setting ~~process of the content storage object URL as a recording target content identifier~~ includes a content storage object URL.

25. (Currently Amended) The information processing method according to Claim ~~claim~~ claim 16, further comprising:

setting wherein protocol information corresponding to the received content is ~~included in said content information; and wherein, the protocol information including~~ a function ID is ~~set in the protocol information, which is set corresponding to said~~ recording source content, as tuner identifying information; and wherein a function ID is ~~set in the protocol information, which is set corresponding to said recording target~~ content, as content storage unit identifying information; and wherein said information processing method further executes setting processing as a control instance that executes control for control objects wherein each of said to identify the tuner control instance and said the storage unit control instance is ~~determined based on said function ID.~~

26. (Currently Amended) The information processing method according to Claim ~~claim~~ claim 16, further comprising:

~~a step for setting a control instance which executes processing control for~~ content specified by the content identifier, and for executing the control for each content ~~based on the control instance; wherein connection management is executed based on~~ configured to manage a connection between the server and the client based on a management table corresponding to an instance ID, the instance ID identifying the ~~which is an identifier for each of said~~ tuner control instance and said the storage unit control instance, ~~a connection ID which is a connection identifier between the server and client, and protocol information corresponding to the delivery content.~~

27. (Currently Amended) The information processing method according to ~~Claim~~ claim 16, wherein ~~said the control request, received from the client, receiving step receives a control request for delivery content according to~~ is based on a SOAP (Simple Object Access Control) protocol from a client; and wherein ~~said control step is configured so as to execute content control based on the control request received from the client.~~

28. (Currently Amended) An information processing method for requesting content received by a tuner in a server ~~with a client which requests data processing of tuner received content as to a server, said the~~ method comprising:

~~a protocol information sending step for transmitting to said server, sending, from a client, first protocol information including a tuner identifying function ID as the tuner identifying the tuner receiving the content, information and second protocol information including a data storage unit identifying function ID as the data storage unit identifying information, within the protocol information included in the content information to be received from said server; an ID acquiring step for acquiring a tuner control instance ID and a storage unit control instance ID to be received from said server; and a control request sending step for executing sending processing of a control request as to each control instance wherein a control instance ID is specified~~ a storage unit of the server storing the content received by the tuner, wherein the content received by the tuner includes a first content received by the tuner over a first channel and a second content received by the tuner over a second channel, the first content and the second content being arranged in a hierarchical content management directory described by metadata stored in the server;

receiving the first content and the second content based on the first protocol information and the second protocol information sent to the server, the first content and the second content being received as a unit of content, wherein a recording source content identifier that is set corresponding to the unit of content is used to receive the first content and the second content, and the recording source content identifier is a channel list Uniform Resource Locator (URL); and

outputting the first content and the second content, wherein the client switches between the first content and the second content based on the channel list URL.

29. (Currently Amended) The information processing method according to Claim ~~claim~~ 28, further comprising:

~~a step for performing setting requests of~~ sending a request to set the recording source content identifier, the recording source content identifier being set to correspond to a ~~as to said tuner control instance of the tuner, and of the recording target content identifier as to said storage unit control instance, and also executing processing for notifying said recording source content identifier as to said storage unit control instance.~~

30. (Currently Amended) The information processing method according to Claim ~~29,~~ wherein said claim 28, further comprising:

sending a request to set a recording ~~source~~ target content identifier, the target content identifier being set to correspond ~~is a channel list URL (Uniform Resource Locator) which is set as identifying information of a channel list including at least multiple channels within the receiving channels of said tuner; and wherein said~~

~~recording target content identifier is a content storage object URL which is set as an identifier of a content storage object corresponding to a content storage region which is set in the said content storage unit server.~~

31. (Cancelled).

32. (Cancelled).

33. (New) A computer-readable storage medium storing a program that, when executed on a processor of a server, causes the processor to perform a method for for executing processing of content received by a tuner in the server, the method comprising:

receiving, by the tuner, content over a plurality of channels, the received content including a first content received by the tuner over a first channel and a second content received by the tuner over a second channel;

storing the received content in a hierarchical content management directory;

storing metadata including attribute information corresponding to the received content, the metadata including information describing the hierarchical content management directory;

arranging the first content and the second content as a unit of content;

setting a recording source content identifier corresponding to a tuner control instance and the unit of content, wherein the tuner control instance is used to send the

received content to a client, and the record source content identifier is a channel list

Uniform Resource Locator (URL);

setting a recording target content identifier corresponding to a storage unit
control instance used to control the storing of the received content;

receiving, from the client, a control request identifying the tuner control instance
or the storage unit control instance; and

providing the first content and the second content to the client by using the
channel list URL.

34. (New) A computer-readable storage medium storing a program that, when
executed on a processor of a client, causes the processor to perform a method for
requesting content received by a tuner in a server, the method comprising:

sending, from a client, first protocol information including a function ID identifying
the tuner receiving the content, and second protocol information including a data
storage unit function ID identifying a storage unit of the server storing the content
received by the tuner, wherein the content received by the tuner includes a first content
received by the tuner over a first channel and a second content received by the tuner
over a second channel, the first content and the second content being arranged in a
hierarchical content management directory described by metadata stored in the server;

receiving the first content and the second content based on the first protocol
information and the second protocol information sent to the server, the first content and
the second content being received as a unit of content, wherein a recording source
content identifier that is set corresponding to the unit of content is used to receive the

first content and the second content, and the recording source content identifier is a channel list Uniform Resource Locator (URL); and

outputting the first content and the second content, wherein the client switches between the first content and the second content based on the channel list URL.